

What is claimed is:

1. A separator for a fuel cell, comprising:
an inlet port receiving fluid used in the fuel cell;
an outlet port exhausting exhaust from the fuel cell;
5 a main flow path connected to the inlet port; and
two or more branch flow paths, each of the branch flow paths having a first end and second end, the first end comprising a throttle communicating with the main flow path, the second end communicating with the outlet port.
- 10 2. The separator of claim 1, wherein:
each of the throttles and the branch flow paths is configured so that pressure loss at the throttle is larger than 0.5 times of pressure loss at the branch flow path.
3. A separator set for one or more fuel cells, comprising:
15 a manifold supplying fluid used in the fuel cells;
two or more flow paths respectively connected to the manifold, each of the flow paths including a throttle; and
two or more separators each including an inlet port and an outlet port, the inlet ports respectively being connected
20 to the flow paths.
4. The separator set of claim 3, wherein:
each of the throttles and the flow paths is configured so that pressure loss at the throttle is larger than 0.5 times of pressure loss at the flow path.
- 25 5. A fuel cell comprising:
an electrolyte membrane having a pair of electrodes

sandwiching the electrolyte membrane; and

a pair of separators sandwiching the pair of electrodes,
each of the separators comprising;

an inlet port receiving fluid used in the fuel cell,

5 an outlet port exhausting exhaust from the fuel
cell,

a main flow path connected to the inlet port, and

two or more branch flow paths, each of the branch
flow paths having a first end and second end, the
10 first end comprising a throttle communicating with
the main flow path, the second end communicating with
the outlet port.

6. The fuel cell of claim 5, wherein:

each of the throttles and the branch flow paths is
15 configured so that pressure loss at the throttle is larger
than 0.5 times of pressure loss at the branch flow path.

7. A fuel cell system comprising:

a fuel cell comprising;

20 an electrolyte membrane having a pair of electrodes
sandwiching the electrolyte membrane; and

first and second separators sandwiching the
electrodes, each of the separators comprising;

an inlet port receiving fluid used in the
fuel cell,

25 an outlet port exhausting exhaust from the
fuel cell,

a main flow path connected to the inlet port,
and

two or more branch flow paths, each of the
branch flow paths having a first end and second
5 end, the first end comprising a throttle
communicating with the main flow path, the
second end communicating with the outlet port;
a fuel supply unit supplying fuel to the first separator;
and

10 an oxidizer supply unit supplying gas including oxidizer
to the second separator.

8. The fuel cell system of claim 7, wherein:

each of the throttles and the branch flow paths is
configured so that pressure loss at the throttle is larger
15 than 0.5 times of pressure loss at the branch flow path.

9. The fuel cell system of claim 7, wherein the fuel cell
comprises a plurality of the fuel cells accumulated with each
other.

10. A fuel cell comprising:

20 first and second separator sets, each of the separator
sets comprising;

a manifold supplying fluid used in the fuel cell;
two or more flow paths respectively connected to
the manifold, each of the flow paths including a
25 throttle;

two or more separators each including an inlet port

and an outlet port, the inlet ports respectively being
connected to the flow paths; and

one or more electrolyte membranes each having a pair
of electrodes sandwiching the electrolyte membrane, each of
5 the electrolyte membrane being sandwiched by the first
separator and the second separator.

11. The fuel cell of claim 10, wherein:

each of the throttles and the flow paths is configured
so that pressure loss at the throttle is larger than 0.5 times
10 of pressure loss at the flow path.

12. A fuel cell system comprising:

a fuel cell comprising;

first and second separator sets, each of the separator
sets comprising;

15 a manifold supplying fluid used in the fuel cell;
two or more flow paths respectively connected to
the manifold, each of the flow paths including a
throttle;

two or more separators each including an inlet port
20 and an outlet port, the inlet ports respectively being
connected to the flow paths; and

one or more electrolyte membranes each having a pair
of electrodes sandwiching the electrolyte membrane, each of
the electrolyte membrane being sandwiched by the first
25 separator and the second separator;

a fuel supply unit supplying fuel to the first separator;

and

an oxidizer supply unit supplying gas including oxidizer to the second separator.

13. The fuel cell system of claim 12, wherein:

5 each of the throttles and the flow paths is configured so that pressure loss at the throttle is larger than 0.5 times of pressure loss at the flow path.